REMARKS

Traversal of Restriction

The Examiner has withdrawn claims 17-21 as directed to a non-elected invention. In a telephone interview on September 6, 2005, the Examiner clarified that this is a new restriction (i.e. Invention III), not part of Invention I, which was previously restricted.

Applicant respectfully traverses this restriction. The Examiner has not given specific reasons why claims 17-21 are directed to an invention that is independent or distinct from that of claims 6-16. It is therefore difficult to argue in opposition to this restriction. However, claims 6-16, particularly method claims 6-9, and claims 17-21 both generally claim the inventive method of reducing/controlling vibration by calculating a residual vibration resulting from a constraint of a component of a first command signal and generating a second command signal based upon the calculated residual vibration. Therefore, action on the merits for claims 17-21 is requested.

Swinbanks

Claims 6, 10 and 13 have been rejected as anticipated by Swinbanks (US 5,838,802). The Examiner admits that Swinbanks uses a microphone to measure residual noise, but argues that transforming the measurement of the residual noise from a time domain to a frequency domain is a "calculation." However, whether performing a Fourier Transform could be considered a "calculation" is not the same question as whether performing the Fourier Transform is "calculating a residual vibration," which is the claim language. In Swinbanks, the residual noise is measured with a microphone and is an ***input*** to the FFT circuit 19. Thus, the FFT circuit

19 does not ***calculate the residual noise***, since the residual noise has already been determined before the FFT circuit 19. The output of the FFT circuit 19 is the same residual noise that was its input. It is simply transformed to a frequency domain. Because Swinbanks does not disclose "calculating a residual vibration," claims 6, 10 and 13 are not anticipated.

Further, Swinbanks does not disclose, "constraining a first component of the first command signal," as also required by claims 6, 10 and 13. The "constraint" mentioned in Swinbanks is a constraint on weights applied by a filter to the input signal (see, e.g., col. 6, lines 6-11), not on a command signal or a component of a command signal.

Southward and Hodgson

Claims 6-16 have been rejected as obvious over Southward (US 5,627,896) in view of Hodgson (US 5,526,292). Southward only mentions determining the residual disturbance using an error sensor 30 (col. 2, lines 17-20). Hodgson similarly discloses only "error sensor means" (col. 8, lines 60-63). The Examiner argues that Hodgson discloses a DSP controller fed by plural sensors 52 and that the DSP controller "inherently calculates a residual vibration using sensor 52." Again, the residual vibration is an input to the DSP controller. Whatever signal processing may or may not occur in the DSP controller, the residual vibration is not ***calculated*** in the DSP controller.

Proposed Amendments

For the reasons stated above, the claims currently pending are allowable. However, in order to expedite resolution of this application, Applicant has proposed minor amendments to the

claims that clarify the distinctions that Applicant is arguing regarding the "calculating a residual vibration" language in the claims. By proposing these amendments, Applicant is not indicating any agreement that the claims were previously unpatentable.

If any additional fees or extensions of time are required, please charge to Deposit Account No. 50-1482.

Respectfully submitted,

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